



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

shn

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/171,910 03/18/99 VAN DIJK D VR2-002

021567 IM22/0119
WELLS ST JOHN ROBERTS GREGORY AND MATKIN
SUITE 1300
601 W FIRST AVENUE
SPOKANE WA 99201-3828

EXAMINER

CHEVALIER, A

ART UNIT

PAPER NUMBER

1772

DATE MAILED:

01/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/171,910

Applicant(s)

VAN DIJK ET AL.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 20-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-19 in Paper No. 15 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. This application does not contain an abstract of the disclosure as required by 37

CFR 1.72(b). An abstract on a separate sheet is required.

3. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use. The instant application is missing section headings.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).

Art Unit: 1772

- (h) Detailed Description of the Invention.
- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing (see 37 CFR 1.821-1.825).

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the mould head 41, page 16, line 31. Correction is required.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 43 in figure 3.

Correction is required.

Claim Objections

6. Claim 17 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n).

Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1772

8. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “which consists at least partially of” in claim 1 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to “consisting essentially of” which is open language and inclusive of more then just what is stated in the claim.

The phrase “consisting substantially of” in claim 1 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to “consisting essentially of” which is open language and inclusive of more then just what is stated in the claim.

The phrase “particles is homogeneously embedded” in claim 1 is unclear which renders the claim vague and indefinite. Is “is” a typographical error or a bad translation, that is suppose to be “that are.”

The term “principal direction” in claims 1, 2, 5, 6, and 19 is unclear which renders the claims vague and indefinite. Is the “principal direction” a defined direction that the fibers must follow or is it defined by the direction that most of the fibers are oriented in.

The phrase “characterized in” in claim 1 is unclear which renders the claims vague and indefinite. It is unclear what is being referred back to, the plastic-based composite product, the plastic, or the particles.

The term "plates" in claims 1-4 is unclear which renders the claims vague and indefinite. It is unclear from the specification, the drawings and the claim language how the plates are different from the fibers. Also do the plates have a length or a diameter of 0.2-2 mm.

The phrase "for instance 80-95%" in claim 1 is unclear which renders the claims vague and indefinite. It is unclear what 80-95% is referring to. Also, it is unclear from the language "for instance" if applicant is trying to claim something with respect to the percentage.

The phrase "large particles with a dominant orientation of the said principal direction of the particles in a chosen product principal direction" in claim 1 is unclear which renders the claims vague and indefinite. Does this phrase mean that the dominant orientation of the large particles in the principal direction? See above 112 rejection of "principal direction."

Claim 2 recites the limitation "the main plane" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the main plane" in line 4. There is insufficient antecedent basis for this limitation in the claim.

The term "main plane" in claims 2 and 3 is unclear which renders the claims vague and indefinite. Is this the main plane of the plastic-based composite, the plastic, or the particle. Also, is the "main plane" something that is predetermined or something that is defined by the orientation of whatever it is referring to.

The phrase "at least more or less" in claim 3 is unclear which renders the claim vague and indefinite. This language makes it unclear whether applicant is trying to claim the plates have an isotropic tensile strength or not.

The phrase "consist substantially of" in claim 4 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to "consisting essentially of" which is open language and inclusive of more then just what is stated in the claim.

The phrase "consist predominantly of" in claim 6 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to "consisting essentially of" which is open language and inclusive of more then just what is stated in the claim.

The phrase "at least one" in claim 6 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

The phrase "one polymer on a basis of styrene" in claim 6 is unclear which renders the claim vague and indefinite. Is this a styrene polymer, copolymer, etc.

The phrase "complies minimally with" in claim 6 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to "characterized by" which is open language and inclusive of more then just what is stated in the claim.

The phrases "originate from" and "preferably one of the following types" in claim 7 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

The phrase "originate from" in claim 7 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to "comprises."

The term "preferably" in claims 7, 8, 9, 11, 13, and 16 is unclear which renders the claims vague and indefinite. The use of this language makes it uncertain if applicant is definitely claim the limitation that refers to preferably. "Preferably" is not a positively recited limitation.

The phrase "tensile strength of 3-25% by mass" in claim 8 is unclear which renders the claim vague and indefinite. It is uncertain how tensile strength is measured as a percentage of mass.

Claim 9 recites the limitation "other particles" in line 3. There is insufficient antecedent basis for this limitation in the claim.

The phrase "other particles" in claim 9 is unclear which renders the claim vague and indefinite. Are these particles different from the small and large particles?

The phrase "originate from at least one type of the class of" in claim 9 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

The phrase "originate from at least one type of the class of" in claim 9 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is take to be equivalent to "comprises."

The phrase "inorganic polymers on a basis of silicates" in claim 9 is unclear which renders the claim vague and indefinite. Is this a silicate polymer, copolymer, etc.

Claims 10 and 11 recite the limitation "other fibers" in line 3. There is insufficient antecedent basis for this limitation in the claim.

The phrase "other fibers" in claims 10 and 11 is unclear which renders the claims vague and indefinite. Are these fibers different from the small and large particles?

Claim 10 recites the limitation "chopped strands" in line 4. There is insufficient antecedent basis for this limitation in the claim.

The phrase "chopped strands" in claim 10 is unclear which renders the claim vague and indefinite. Are these strands different from the small and large particles?

The phrase "one or more types of the class of" in claim 11 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

The phrase "one or more types of the class of" in claim 11 is unclear which renders the claim vague and indefinite. For purposes of examination this phrase is taken to be equivalent to "comprises."

The phrase "natural biopolymers on a basis of cellulose" in claim 11 is unclear which renders the claim vague and indefinite. Is this a cellulose polymer, copolymer, etc.

Claim 12 is unclear which renders the claim vague and indefinite. It is unclear if applicant desires the polymer material to consist of a blend of polypropylene, polystyrene, polyethylene, or polyacrylate. Or if Applicant wishes the polymer material to be a material selected from the group consisting of polypropylene, polystyrene, polyethylene, and polyacrylate.

The phrase "consists of one or more" in claim 13 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

The phrase "homo- or copolymerisates" in claim 13 is unclear which renders the claim vague and indefinite. Is this suppose to be homopolymerizes and copolymerizes.

The term "M.F.I. (230/2,16)" in claim 13 is unclear which renders the claim vague and indefinite. What is a "M.F.I. (230/2,16)."

Claim 13 recites the limitation "technical wood" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

The term "technical wood" in claim 13 is unclear which renders the claim vague and indefinite. It is uncertain from the specification and the claim language what the technical wood is, i.e. the wood particles, the plastic-based composite product, etc.

Claim 14 is unclear which renders the claim vague and indefinite. Is the claim saying that the product further comprises at least one additive.

The phrase "belonging to at least one of the following classes" in claim 15 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is "where in R is a material selected from the group consisting of A, B, C, and D," MPEP § 2173.05.

Claim 16 recites the limitation "technical wood" in lines 4 and 6. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1772

The phrase “preferably one or more of the following are used” in claim 16 is rejected under 35 U.S.C. 112, second paragraph for being in improper alternative language. Proper language for a markush group in a claim is “wherein R is a material selected from the group consisting of A, B, C, and D,” MPEP § 2173.05.

The terms “polybond (spider)”, “polyweb (DOW)”, and “Exxelor (Exxon)” in claim 16 are unclear which renders the claim vague and indefinite. It is uncertain what these are, trade names, compounds, etc.

The phrase “a plastic-based composite layer as claimed in any of the foregoing claims” in claim 18 is unclear which renders the claim vague and indefinite. It is unclear what types of limitations are being claimed for the plastic-based composite layer. For purposes of examination since claim 18 is dependent from claim 2 it will possess the limitations of claim 2 for the plastic-based composite layer.

Claim 19 is unclear which renders the claim vague and indefinite. It is uncertain the limitations desired for the skin layer. Also what is the “first mentioned plastic-based composite layer.”

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely

Art Unit: 1772

exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation small particles, and the claim also recites in particular plates or fibers which is the narrower statement of the range/limitation.

Claim 6 recites the broad recitation thermoplastic polymer, and the claim also recites in particular at least one polyolefin of one polymer on a basis of styrene which is the narrower statement of the range/limitation.

Claim 6 recites the broad recitation ratio ... a minimum of 4, and the claim also recites preferably lies in the range of 6-80, which is the narrower statement of the range/limitation.

Claim 7 recites the broad recitation softwood or hardwood, and the claim also recites preferably one of the following types: fir, spruce, birch, poplar which is the narrower statement of the range/limitation.

Claim 8 recites the broad recitation 3-35% by mass, and the claim also recites preferably 5-18% by mass, which is the narrower statement of the range/limitation.

Claim 9 recites the broad recitation inorganic polymers on a basis of silicates, and the claim also recites preferably glass, which is the narrower statement of the range/limitation.

Claim 11 recites the broad recitation natural biopolymers on a basis of cellulose, and the claim also recites preferably from flax, jute, hemp, sisal, coconut, bamboo and miscanthus which is the narrower statement of the range/limitation.

Claim 13 recites the broad recitation of 1-30 dg/min, and the claim also recites preferably 2-15 dg/min, which is the narrower statement of the range/limitation.

Claim 13 recites the broad recitation of 10-50% by mass, and the claim also recites preferably 15-40% by mass, which is the narrower statement of the range/limitation.

Claim 16 recites the broad recitation of 1-3, and the claim also recites preferably 2.5, which is the narrower statement of the range/limitation.

Claim 16 recites the broad recitation of 1-5, and the claim also recites preferably 2, which is the narrower statement of the range/limitation.

Claim 16 recites the broad recitation of 2-3, and the claim also recites preferably 2.5, which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

10. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puppini (5,882,564).

Puppini discloses a resin and wood fiber composite comprising a matrix comprising thermoplastic resin and dispersed in the resin a discontinuous reinforcing phase of a fiber (col. 4, line 8-13).

The matrix phase having an embedded structure including a three-dimensional distribution of randomly oriented reinforcing elements; a two dimensional distribution of randomly oriented element structures such as chopped fiber mat; an order two dimensional structure of isometry in the plane of the structure; and a highly aligned array of parallel fibers randomly distributed normal to the fiber direction (col. 7, lines 31-40). The matrix phase also

Art Unit: 1772

has a random isotropic distribution of fiber optimizes structural properties in the profile (col. 2, lines 65-67).

The thermoplastic resin can be polymers such as polyolefins such as polyethylene, polypropylene, poly(ethylene-copropylene), polyethylene-co-alphaolefin, or polystyrene polymers (col. 5-6, lines 67-7).

The fiber can included hard and soft wood, flax, other known sources of cellulosic materials (col. 6, lines 15-18), glass, alumina silicates, or plate-like or particulate materials such as mica (col. 7, lines 42-55). The fibers can comprise longer fiber of length 5-10 mm and shorter fibers of length 0.1-1 mm (col. 3, lines 17-20).

The matrix polymer is commonly combined with thermal stabilizers, lubricants, plasticizers, organic and inorganic pigments, fillers, biocides, processing aids, flame retardants and other commonly available additive materials. See column 6, lines 28-31.

The thermoplastic composition forms a profile extrudate, which is surrounded by an exterior wall or shell. See the abstract and column 10, lines 61-67.

Puppini fails to teach the orientation of the longer and shorter fibers. However, it would have been an obvious matter of design choice to randomly orient the short fibers and linearly orient the long fibers since both orientations are taught in the disclosure.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139.

Art Unit: 1772

The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

If attempts to reach the Examiner are unsuccessful, the Examiner's acting supervisor, Rena L. Dye can be reached by dialing (703) 308-4331. The fax phone number for the organization official non-final papers is (703) 305-5436. The fax number for after final papers is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

AC

01/12/01



RENA L. DYE
PRIMARY EXAMINER

Tech Center 1700